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PRELIMINARY REPORT
INDUSTRY SERIES

1987

Census of Manufactures

MC87-I-36C(P)
Issued July 1989

ELECTRIC LIGHTING AND WIRING EQUIPMENT

Industries 3641, 3643, 3644, 3645, 3646, 3647, and 3648

INTRODUCTION

This report presents preliminary statistics from the 1987 Census of Manufactures for those establishments classified in the industries listed above. These data will be superseded by a more comprehensive final paperbound report. The method of data collection and use of administrative data are discussed in detail in the appendix.

All dollar figures included in this report are at prices current for the year specified and, therefore, unadjusted for changes in price levels. Consequently, when making comparisons to prior years, users should take into consideration the inflation that has occurred.

The definitions of these industries are the same as those used in the 1987 Standard Industrial Classification (SIC) Manual.¹

INDUSTRY 3641, ELECTRIC LAMPS

In the 1987 Census of Manufactures, Industry 3641, Electric Lamps, had employment of 22.0 thousand.

The total value of shipments for establishments classified in this industry was \$3.1 billion. The products primary to this industry appear in table 2 and aggregated to \$3.0 billion in 1987.

The cost of materials and services used by establishments in this industry amounted to \$971.5 million in 1987. Data on specific materials consumed appear in table 3.

INDUSTRY 3643, CURRENT-CARRYING WIRING DEVICES

In the 1987 Census of Manufactures, Industry 3643, Current-Carrying Wiring Devices, had employment of 50.5

thousand. The employment figure was 13 percent above the 44.5 thousand reported in 1982.

The total value of shipments for establishments classified in this industry was \$4.0 billion. The products primary to this industry appear in table 2 and aggregated to \$4.0 billion in 1987.

The cost of materials and services used by establishments in this industry amounted to \$1.6 billion in 1987. Data on specific materials consumed appear in table 3.

INDUSTRY 3644, NONCURRENT-CARRYING WIRING DEVICES

In the 1987 Census of Manufactures, Industry 3644, Noncurrent-Carrying Wiring Devices, had employment of 21.4 thousand. The employment figure was 19 percent below the 26.3 thousand reported in 1982. Compared with 1986, employment in 1987 decreased 8 percent. The 1986 data are based on the Bureau's annual survey of manufactures (ASM), which is a sample survey conducted each year between censuses.

The total value of shipments for establishments classified in this industry was \$2.7 billion. The products primary to this industry appear in table 2 and aggregated to \$2.8 billion in 1987.

The cost of materials and services used by establishments in this industry amounted to \$1.2 billion in 1987. Data on specific materials consumed appear in table 3.

INDUSTRY 3645, RESIDENTIAL LIGHTING FIXTURES

In the 1987 Census of Manufactures, Industry 3645, Residential Lighting Fixtures, had employment of 22.4 thousand. The employment figure was 1 percent above the 22.2 thousand reported in 1982.

¹Standard Industrial Classification Manual: 1987. For sale by Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. Stock No. 041-001-00314-2.

Address inquiries to Bureau of the Census, Industry Division, Washington, DC 20233, or call Brandy Yarbrough (301) 763-7304.



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The total value of shipments for establishments classified in this industry was \$1.8 billion. The products primary to this industry appear in table 2 and aggregated to \$1.7 billion in 1987.

The cost of materials and services used by establishments in this industry amounted to \$786.6 million in 1987. Data on specific materials consumed appear in table 3.

INDUSTRY 3646, COMMERCIAL LIGHTING FIXTURES

In the 1987 Census of Manufactures, Industry 3646, Commercial Lighting Fixtures, had employment of 23.0 thousand. The employment figure was 22 percent above the 18.9 thousand reported in 1982.

The total value of shipments for establishments classified in this industry was \$2.8 billion. The products primary to this industry appear in table 2 and aggregated to \$2.7 billion in 1987.

The cost of materials and services used by establishments in this industry amounted to \$1.4 billion in 1987. Data on specific materials consumed appear in table 3.

INDUSTRY 3647, VEHICULAR LIGHTING EQUIPMENT

In the 1987 Census of Manufactures, Industry 3647, Vehicular Lighting Equipment, had employment of 15.8 thousand. The employment figure was 22 percent above the 12.9 thousand reported in 1982. Compared with 1986, employment in 1987 increased 19 percent. The 1986 data are based on the Bureau's annual survey of manufactures (ASM), which is a sample survey conducted each year between censuses.

The total value of shipments for establishments classified in this industry was \$2.0 billion. The products primary to this industry appear in table 2 and aggregated to \$1.4 billion in 1987.

The cost of materials and services used by establishments in this industry amounted to \$1.0 billion in 1987. Data on specific materials consumed appear in table 3.

INDUSTRY 3648, LIGHTING EQUIPMENT, N.E.C.

In the 1987 Census of Manufactures, Industry 3648, Lighting Equipment, N.E.C., had employment of 14.4 thousand. The employment figure was 18 percent above the 12.2 thousand reported in 1982.

The total value of shipments for establishments classified in this industry was \$1.7 billion. The products primary to this industry appear in table 2 and aggregated to \$1.7 billion in 1987.

The cost of materials and services used by establishments in this industry amounted to \$803.2 million in 1987. Data on specific materials consumed appear in table 3.

ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used in the tables in this publication:

-	Represents zero.
(D)	Withheld to avoid disclosing data for individual companies; data are included in higher level totals.
(NA)	Not available.
(NC)	Not comparable.
(S)	Withheld because estimate did not meet publication standards on the basis of either the response rate or a consistency review.
(X)	Not applicable.
(Z)	Less than half the unit shown.
do	Ditto.
n.e.c.	Not elsewhere classified.
n.s.k.	Not specified by kind.
pt.	Part.
r	Revised.
SIC	Standard Industrial Classification.

Other abbreviations, such as lb, gal, yd, doz, bbl, and s tons, are used in the customary sense.

CONTACTS FOR DATA USERS

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Census/ASM		
Durables	Kenneth Hansen	(301) 763-7304
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Import/Export Publications	Foreign Trade Division	(301) 763-5140
Industry Analysis and Forecasts	International Trade Administration	(202) 377-4356

Table 1. Historical Statistics for the Industry: 1987 and Earlier Years

[Excludes date for exuleries. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendix]

Year¹	Companies² (no.)	All establishments³		All employees		Production workers			Value added by manufac- ture⁴ (million dollars)	Cost of materials (million dollars)	Value of shipments (million dollars)	New capital expend- itures (million dollars)	End-of- year inventor- ies⁴ (million dollars)	Ratios		
		Total (no.)	With 20 employ- ees or more (no.)	Number (1,000)	Peyroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)						Spe- cial- ization (per- cent)	Cover- age (per- cent)	
1987 Census ----	INDUSTRY 3641, ELECTRIC LAMPS⁵															
	(NA)	119	65	22.0	523.0	18.8	36.5	418.9	2 120.2	971.5	3 085.0	101.5	302.0	(NA)	(NA)	
	INDUSTRY 3643, CURRENT-CARRYING WIRING DEVICES															
1987 Census ----	(NA)	458	276	50.5	1 002.6	36.5	69.9	581.2	2 400.3	1 607.6	4 006.7	112.8	716.0	(NA)	(NA)	
1986 ASM ----	(NA)	(NA)	(NA)	48.3	941.3	34.6	65.0	539.8	2 147.5	1 421.7	3 537.0	101.2	665.6	(NA)	(NA)	
1985 ASM ----	(NA)	(NA)	(NA)	49.8	920.3	36.5	66.1	541.8	2 089.9	1 416.1	3 518.2	109.0	639.2	(NA)	(NA)	
1984 ASM ----	(NA)	(NA)	(NA)	50.7	905.5	37.5	69.3	537.7	2 042.1	1 446.1	3 415.1	100.3	617.3	(NA)	(NA)	
1983 ASM ----	(NA)	(NA)	(NA)	45.9	786.5	34.1	63.6	483.5	1 742.5	1 210.2	2 914.0	85.5	571.2	(NA)	(NA)	
1982 Census ----	357	415	222	44.5	699.8	31.9	57.2	421.6	1 464.2	996.7	2 510.3	88.8	500.0	85	76	
1981 ASM ----	(NA)	(NA)	(NA)	51.7	736.4	38.6	72.8	464.3	1 597.3	1 185.3	2 762.2	103.7	499.7	(NA)	(NA)	
1980 ASM ----	(NA)	(NA)	(NA)	50.7	666.3	38.0	71.2	419.3	1 501.6	1 109.0	2 603.5	116.3	454.8	(NA)	(NA)	
1979 ASM ----	(NA)	(NA)	(NA)	53.7	642.3	41.3	78.7	421.2	1 454.1	1 044.6	2 453.6	99.9	454.4	(NA)	(NA)	
1978 ASM ----	(NA)	(NA)	(NA)	44.7	513.3	34.7	68.0	333.9	1 109.9	772.0	1 893.4	59.5	347.6	(NA)	(NA)	
1977 Census ----	362	413	198	43.9	480.3	33.6	66.2	312.1	1 100.1	738.7	1 795.2	55.8	341.5	84	79	
1976 ASM ----	(NA)	(NA)	(NA)	43.8	432.2	33.0	63.7	274.5	1 044.6	668.5	1 681.8	37.6	330.8	(NA)	(NA)	
1975 ASM ----	(NA)	(NA)	(NA)	37.0	344.2	26.6	49.3	201.5	727.4	498.2	1 247.3	34.5	284.7	(NA)	(NA)	
1974 ASM ----	(NA)	(NA)	(NA)	55.0	470.6	41.2	79.4	291.4	1 088.3	730.9	1 777.3	64.8	393.0	(NA)	(NA)	
1973 ASM ----	(NA)	(NA)	(NA)	51.9	406.3	40.7	80.1	266.2	881.7	594.4	1 443.4	47.1	307.6	(NA)	(NA)	
1972 Census ----	366	401	210	50.4	382.5	39.0	76.2	244.6	792.1	492.0	1 255.9	53.7	257.2	83	81	
1987 Census ----	INDUSTRY 3644, NONCURRENT-CARRYING WIRING DEVICES															
	(NA)	210	128	21.4	539.9	15.3	31.4	346.3	1 565.9	1 201.0	2 725.5	73.3	546.1	(NA)	(NA)	
	(NA)	(NA)	(NA)	23.4	557.7	16.2	31.6	340.1	1 483.1	1 177.1	2 660.3	62.8	559.0	(NA)	(NA)	
1986 ASM ----	(NA)	(NA)	(NA)	23.6	541.2	16.7	33.6	338.1	1 390.0	1 139.8	2 541.5	79.1	552.5	(NA)	(NA)	
1985 ASM ----	(NA)	(NA)	(NA)	23.3	515.7	16.5	32.8	323.7	1 289.0	1 171.3	2 426.2	59.1	561.9	(NA)	(NA)	
1984 ASM ----	(NA)	(NA)	(NA)	24.5	511.2	17.1	33.9	316.3	1 194.3	1 132.0	2 309.4	47.5	587.4	(NA)	(NA)	
1983 ASM ----	(NA)	(NA)	(NA)	23.5	511.2	17.1	33.9	316.3	1 194.3	1 132.0	2 309.4	47.5	587.4	(NA)	(NA)	
1982 Census ----	187	226	140	26.3	509.9	18.1	35.3	314.0	1 218.7	1 130.5	2 399.6	69.1	575.2	79	88	
1981 ASM ----	(NA)	(NA)	(NA)	28.4	540.1	19.5	38.4	327.1	1 276.8	1 181.5	2 404.8	74.2	540.3	(NA)	(NA)	
1980 ASM ----	(NA)	(NA)	(NA)	28.5	477.8	19.8	37.9	296.5	1 146.3	1 043.2	2 174.5	69.5	475.7	(NA)	(NA)	
1979 ASM ----	(NA)	(NA)	(NA)	30.3	464.6	21.5	42.4	299.4	1 131.4	1 063.4	2 151.9	64.8	469.7	(NA)	(NA)	
1978 ASM ----	(NA)	(NA)	(NA)	27.3	382.6	19.7	38.3	245.8	896.0	841.3	1 719.8	43.5	407.4	(NA)	(NA)	
1977 Census ----	173	202	123	25.8	330.1	18.4	35.9	210.9	744.4	682.4	1 421.8	32.8	350.5	82	83	
1976 ASM ----	(NA)	(NA)	(NA)	24.4	290.5	17.1	32.9	182.7	639.0	618.4	1 239.9	25.2	329.5	(NA)	(NA)	
1975 ASM ----	(NA)	(NA)	(NA)	23.8	271.5	16.8	32.0	175.3	588.5	550.6	1 152.8	39.9	306.6	(NA)	(NA)	
1974 ASM ----	(NA)	(NA)	(NA)	26.5	276.6	19.8	38.3	185.4	676.1	542.1	1 158.2	35.6	318.2	(NA)	(NA)	
1973 ASM ----	(NA)	(NA)	(NA)	27.3	254.4	20.6	40.8	175.2	555.6	484.8	1 026.9	36.4	223.7	(NA)	(NA)	
1972 Census ----	149	179	117	25.7	217.0	19.3	37.7	147.0	490.8	400.8	886.4	25.2	186.8	78	78	
1987 Census ----	INDUSTRY 3645, RESIDENTIAL LIGHTING FIXTURES															
	(NA)	565	218	22.4	397.2	17.4	33.9	253.2	1 000.9	786.6	1 763.8	24.5	377.5	(NA)	(NA)	
	(NA)	(NA)	(NA)	20.5	353.7	15.8	30.2	220.4	888.9	748.3	1 628.5	20.2	351.3	(NA)	(NA)	
1986 ASM ----	(NA)	(NA)	(NA)	21.5	349.6	16.9	30.7	223.5	856.4	758.1	1 607.5	31.3	350.5	(NA)	(NA)	
1985 ASM ----	(NA)	(NA)	(NA)	22.6	344.5	17.9	34.2	220.7	841.7	783.6	1 606.7	28.8	339.1	(NA)	(NA)	
1984 ASM ----	(NA)	(NA)	(NA)	23.4	328.9	18.4	34.9	209.9	818.3	729.9	1 529.5	15.7	314.0	(NA)	(NA)	
1983 ASM ----	(NA)	(NA)	(NA)	23.4	328.9	18.4	34.9	209.9	818.3	729.9	1 529.5	15.7	314.0	(NA)	(NA)	
1982 Census ----	613	643	250	22.2	308.8	16.9	31.5	194.7	708.7	634.5	1 351.8	17.9	280.2	93	95	
1981 ASM ----	(NA)	(NA)	(NA)	23.8	296.8	18.1	34.9	186.7	598.6	607.2	1 202.4	14.4	245.3	(NA)	(NA)	
1980 ASM ----	(NA)	(NA)	(NA)	24.0	271.1	18.3	34.3	169.5	536.9	599.6	1 147.5	16.5	226.1	(NA)	(NA)	
1979 ASM ----	(NA)	(NA)	(NA)	25.8	267.9	20.1	36.7	170.5	547.3	584.4	1 115.2	17.6	230.3	(NA)	(NA)	
1978 ASM ----	(NA)	(NA)	(NA)	24.6	252.5	19.3	35.0	160.6	551.6	567.6	1 110.6	16.0	213.7	(NA)	(NA)	
1977 Census ----	676	710	244	23.7	229.5	18.2	33.4	139.4	494.2	495.6	986.6	11.8	193.2	95	92	
1976 ASM ----	(NA)	(NA)	(NA)	21.4	206.8	16.7	30.6	128.6	428.5	428.9	843.0	14.4	161.3	(NA)	(NA)	
1975 ASM ----	(NA)	(NA)	(NA)	18.5	172.8	14.1	26.4	103.2	332.3	352.6	688.5	15.0	134.6	(NA)	(NA)	
1974 ASM ----	(NA)	(NA)	(NA)	21.6	183.1	16.7	30.9	109.6	374.0	369.6	747.2	19.5	144.0	(NA)	(NA)	
1973 ASM ----	(NA)	(NA)	(NA)	28.0	204.8	22.3	42.2	132.2	415.2	422.1	829.6	12.2	158.3	(NA)	(NA)	
1972 Census ----	665	701	278	26.5	189.3	21.0	40.6	120.7	390.2	386.5	767.2	13.7	137.7	97	93	
1987 Census ----	INDUSTRY 3646, COMMERCIAL LIGHTING FIXTURES															
	(NA)	274	151	23.0	482.3	15.8	31.8	282.2	1 378.7	1 384.6	2 760.8	61.6	452.7	(NA)	(NA)	
	(NA)	(NA)	(NA)	22.5	456.7	16.0	31.3	269.7	1 282.6	1 340.0	2 623.7	56.4	421.4	(NA)	(NA)	
1986 ASM ----	(NA)	(NA)	(NA)	21.1	411.6	15.6	29.9	243.6	1 104.1	1 228.0	2 321.2	53.0	379.2	(NA)	(NA)	
1985 ASM ----	(NA)	(NA)	(NA)	19.7	362.3	14.6	28.4	222.5	987.5	1 068.3	2 051.6	47.5	343.0	(NA)	(NA)	
1984 ASM ----	(NA)	(NA)	(NA)	19.6	342.1	14.0	27.5	203.2	871.6	938.3	1 800.0	37.5	342.2	(NA)	(NA)	
1983 ASM ----	(NA)	(NA)	(NA)	19.6	342.1	14.0	27.5	203.2	871.6	938.3	1 800.0	37.5	342.2	(NA)	(NA)	
1982 Census ----	219	243	140	18.9	313.3	13.4	25.7	184.2	774.8	892.3	1 671.9	32.0	290.8	91	87	
1981 ASM ----	(NA)	(NA)	(NA)	18.8	277.5	13.2	25.0	158.8	722.7	867.7	1 605.9	27.6	251.5	(NA)	(NA)	
1980 ASM ----	(NA)	(NA)	(NA)	18.7	250.0	13.2	24.8	143.1	681.0	798.9	1 463.3	32.9	254.9	(NA)	(NA)	
1979 ASM ----	(NA)	(NA)	(NA)	18.7	223.2	13.0	25.4	132.4	651.1	699.7	1 339.3	25.2	250.7	(NA)	(NA)	
1978 ASM ----	(NA)	(NA)	(NA)	16.8	193.5	12.0	22.9	115.9	502.0	572.8	1 062.5	20.8	208.8	(NA)	(NA)	
1977 Census ----	192	218	122	15.6	169.1	11.1	20.6	98.8	434.7	498.4	922.7	18.0	182.3	90	86	
1976 ASM ----	(NA)	(NA)	(NA)	15.4	154.2	11.5	21.5	91.9	391.8	435.2	818.8	13.4	168.8	(NA)	(NA)	
1975 ASM ----	(NA)	(NA)	(NA)	15.7	148.3	11.3	21.3	90.8	347.2	411.4	765.4	11.8	151.7	(NA)	(NA)	
1974 ASM ----	(NA)	(NA)	(NA)	18.9	161.4	14.2	27.4	101.6	389.9	452.1	828.0	21.7	175.5	(NA)	(NA)	
1973 ASM ----	(NA)	(NA)	(NA)	20.1	167.9	15.5	29.4	105.3	357.0	425.4	775.4	26.5	150.2	(NA)	(NA)	
1972 Census ----	205	236	140	18.8	148.3	14.0	27.0	93.2	350.4	374.8	718.7	13.7	127.5	90	91	
1987 Census ----	INDUSTRY 3647, VEHICULAR LIGHTING EQUIPMENT															
	(NA)	72	49	15.8	523.9	11.8	23.3	384.7	957.1	1 025.6	1 969.6	75.7	230.7	(NA)	(NA)	
	(NA)	(NA)	(NA)	13.3	439.0	9.8	20.0	309.9	873.9	870.7	1 729.7	150.6	193.7	(NA)	(NA)	
1986 ASM ----	(NA)	(NA)	(NA)	12.8	393.8	9.6	19.4	283.3	798.6	659.0	1 453.1	87.7	160.2	(NA)	(NA)	
1985 ASM ----	(NA)	(NA)	(NA)	13.0	382.3	9.9	20.0	271.5	832.4	602.0	1 418.6	39.9	151.4	(NA)	(NA)	
1984 ASM ----	(NA)	(NA)	(NA)	13.9	344.1	10.7	21.6	250.0	790.9	501.4	1 282.1	34.4	138.7	(NA)	(NA)	
1983 ASM ----	(NA)	(NA)	(NA)	13.9												

See footnotes at end of table.

Table 1. Historical Statistics for the Industry: 1987 and Earlier Years—Con.

[Excludes data for auxiliaries. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendix.]

Year ¹	All establishments ³			All employees		Production workers			Value added by manufac- ture ⁴ (million dollars)	Cost of materials (million dollars)	Value of shipments (million dollars)	New capital expendi- tures (million dollars)	End-of- year inventories ⁴ (million dollars)	Ratios	
	Com- panies ² (no.)	Total (no.)	With 20 employ- ees or more (no.)	Number (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)						Spe- cial- ization (per- cent)	Cover- age (per- cent)
INDUSTRY 3647, VEHICULAR LIGHTING EQUIPMENT—Con.															
1982 Census ----	78	84	54	12.9	281.6	9.6	18.8	193.4	602.4	411.2	1 013.6	43.8	122.9	65	96
1981 ASM -----	(NA)	(NA)	(NA)	13.3	292.9	10.0	19.4	206.6	564.5	387.9	956.3	70.0	116.0	(NA)	(NA)
1980 ASM -----	(NA)	(NA)	(NA)	12.9	265.6	9.8	18.8	185.0	506.2	365.5	876.0	51.1	114.8	(NA)	(NA)
1979 ASM -----	(NA)	(NA)	(NA)	15.8	285.2	12.5	24.9	205.8	603.3	461.4	1 061.5	51.1	121.6	(NA)	(NA)
1978 ASM -----	(NA)	(NA)	(NA)	15.8	279.8	12.5	25.2	204.6	602.2	468.8	1 057.2	41.2	113.9	(NA)	(NA)
1977 Census ----	70	75	43	14.5	246.0	11.4	23.3	178.8	536.0	388.9	908.5	46.3	97.1	68	94
1976 ASM -----	(NA)	(NA)	(NA)	14.4	211.9	11.2	22.5	151.3	453.5	330.3	771.1	21.4	91.3	(NA)	(NA)
1975 ASM -----	(NA)	(NA)	(NA)	12.8	168.6	9.9	19.2	119.2	333.1	247.6	590.6	15.2	69.0	(NA)	(NA)
1974 ASM -----	(NA)	(NA)	(NA)	14.7	175.1	11.5	22.7	125.1	326.0	277.2	598.0	46.6	82.3	(NA)	(NA)
1973 ASM -----	(NA)	(NA)	(NA)	14.5	171.8	11.5	23.9	124.3	331.2	257.8	577.4	33.7	69.4	(NA)	(NA)
1972 Census ----	45	47	31	13.6	142.1	10.7	21.5	101.9	299.8	205.2	499.8	7.2	50.3	68	94
INDUSTRY 3648, LIGHTING EQUIPMENT, N.E.C.															
1987 Census ----	(NA)	264	128	14.4	305.2	9.9	19.3	167.1	886.1	803.2	1 676.7	31.4	290.0	(NA)	(NA)
1986 ASM -----	(NA)	(NA)	(NA)	13.2	270.6	9.1	17.5	150.1	922.9	681.2	1 607.3	32.5	250.3	(NA)	(NA)
1985 ASM -----	(NA)	(NA)	(NA)	13.6	272.7	9.4	18.6	153.2	843.9	670.3	1 515.5	43.4	263.1	(NA)	(NA)
1984 ASM -----	(NA)	(NA)	(NA)	13.9	251.3	9.8	18.9	143.9	693.7	614.1	1 303.5	33.9	242.3	(NA)	(NA)
1983 ASM -----	(NA)	(NA)	(NA)	11.8	210.5	8.4	15.8	119.7	539.0	458.6	992.9	17.1	190.9	(NA)	(NA)
1982 Census ----	222	233	113	12.2	207.9	8.5	16.1	121.2	566.4	454.4	1 028.0	28.0	188.6	87	74
1981 ASM -----	(NA)	(NA)	(NA)	14.5	233.9	10.1	20.0	135.0	613.0	536.0	1 133.1	32.0	197.9	(NA)	(NA)
1980 ASM -----	(NA)	(NA)	(NA)	14.5	209.4	10.2	20.1	121.2	562.3	479.4	1 031.6	28.4	174.3	(NA)	(NA)
1979 ASM -----	(NA)	(NA)	(NA)	14.0	182.8	10.0	19.5	106.3	499.3	414.7	897.9	25.0	163.4	(NA)	(NA)
1978 ASM -----	(NA)	(NA)	(NA)	12.7	159.4	9.1	17.6	93.6	394.3	369.7	762.2	22.3	135.6	(NA)	(NA)
1977 Census ----	208	223	119	12.8	148.0	9.1	17.7	85.7	342.5	332.7	670.6	15.8	128.5	85	81
1976 ASM -----	(NA)	(NA)	(NA)	11.4	116.6	8.4	15.8	69.0	267.7	243.6	510.0	14.4	95.8	(NA)	(NA)
1975 ASM -----	(NA)	(NA)	(NA)	10.6	103.0	7.4	14.1	59.7	244.4	224.8	475.4	11.6	91.1	(NA)	(NA)
1974 ASM -----	(NA)	(NA)	(NA)	12.5	112.4	8.9	17.4	67.3	289.7	251.4	538.1	19.3	102.1	(NA)	(NA)
1973 ASM -----	(NA)	(NA)	(NA)	13.0	112.2	9.5	18.8	68.0	284.9	241.0	521.1	18.9	98.9	(NA)	(NA)
1972 Census ----	172	190	95	12.7	107.9	9.2	18.4	63.1	254.3	219.4	466.5	16.6	85.5	86	79

Note: Establishments of single unit companies with up to 20 employees (cutoff varied by industry) were excluded from the mail portion of the census. Data for these establishments (and a small number of larger establishments whose reports were not received at the time the data were tabulated) were estimated based on administrative-record information from other agencies in conjunction with industry averages. These establishments accounted for the following percent of total value of shipments: SIC 3641, 2%; SIC 3643, 7%; SIC 3644, 4%; SIC 3645, 16%; SIC 3646, 6%; SIC 3647, 1%; and SIC 3648, 10%.

¹In annual survey of manufactures (ASM) years, data are estimates based on a representative sample of establishments canvassed annually and may differ from results of a complete canvass of all establishments. ASM publication shows percentage standard errors. Unless otherwise noted, for data prior to 1972, see 1972 Census of Manufactures, vol. II, table 1a of the industry chapter.

²For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

³Includes establishments with payroll at any time during year.

⁴Beginning with the 1982 Census of Manufactures, all respondents were requested to report their inventories at (the lower of) cost or market prior to adjustment to LIFO cost. This is a change from prior Censuses and annual surveys of manufactures in which respondents were permitted to value their inventories using any generally accepted accounting method. Consequently, inventories and value added by manufacture are not comparable to prior-year data.

⁵Industry definition is new for 1987 Census of Manufactures. An explanation of the Standard Industrial Classification revision will appear in the final industry series text that supercedes this report.

⁶Estimates for new capital expenditures have associated standard error of 15 percent or more and may be of limited reliability. Estimates for other data items are of acceptable reliability.

Table 2. Product and Product Classes—Quantity and Value of Shipments by All Producers: 1987 and 1982

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For further explanation, see Value of Shipments in appendix. For meaning of abbreviations and symbols, see introductory text.]

1987 product code	Product	1987		1982	
		Number of companies with shipments of \$100,000 or more	Value of product shipments ¹ (million dollars)	Number of companies with shipments of \$100,000 or more	Value of product shipments ¹ (million dollars)
3641--	ELECTRIC LAMPS (BULBS AND TUBES)				
	Total	(NA)	² 965.3	(NA)	² 278.7
36411 -- 36411 00	Electric lamp bulbs and tubes: Electric lamp bulbs and tubes (including sealed beam lamp bulbs) (for additional detail, see Current Industrial Report MQ-36B, Electric Lamps (Bulbs Only))	44	2 716.5	20	³ 977.2
36412 -- 36412 00	Electric lamp (bulbs and tubes) components: Electric lamp (bulbs and tubes) components (including bases, supports, lead-ins, and filaments, but excluding lamp bulb blanks)	13	194.6	21	⁴ 252.8
36410 -- 36410 00	Electric lamps (bulbs), n.s.k.	(NA)	54.1	(NA)	48.7
	Electric lamps (bulbs), n.s.k., typically for establishments with 20 employees or more (see note)	(NA)	50.1	(NA)	⁵ 11.7
36410 02	Electric lamps (bulbs), n.s.k., typically for establishments with less than 20 employees (see note)	(NA)	4.0	(NA)	37.0

See footnotes at end of table.

Table 2. Product and Product Classes—Quantity and Value of Shipments by All Producers: 1987 and 1982—Con.

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For further explanation, see Value of Shipments in appendix. For meaning of abbreviations and symbols, see introductory text.]

1987 product code	Product	1987		1982	
		Number of companies with shipments of \$100,000 or more	Value of product shipments¹ (million dollars)	Number of companies with shipments of \$100,000 or more	Value of product shipments¹ (million dollars)
3643--	CURRENT-CARRYING WIRING DEVICES				
	Total -----	(NA)	4 053.5	(NA)	2 761.4
36431 -- 36431 00	Lampholders: Lampholders (for additional detail, see Current Industrial Report MA-36K, Wiring Devices and Supplies) -----	39	214.9	33	154.7
36432 -- 36432 00	Convenience and power outlets: Convenience and power outlets, both general and special purpose, excluding pin-and-sleeve type (for additional detail, see Current Industrial Report MA-36K, Wiring Devices and Supplies) -----	18	282.7	21	169.5
36433 -- 36433 00	Switches, for electrical circuitry: Switches for electrical circuitry (including vehicular switches) (for additional detail, see Current Industrial Report MA-36K, Wiring Devices and Supplies) -----	118	1 466.5	101	965.5
36434 -- 36434 00	Metal contacts: Metal contacts, precious and other (for additional detail, see Current Industrial Report MA-36K, Wiring Devices and Supplies) -----	22	159.5	34	164.3
36435 -- 36435 00	Wire connectors for electrical circuitry: Wire connectors for electrical circuitry (for additional detail, see Current Industrial Report MA-36K, Wiring Devices and Supplies) -----	73	827.2	83	591.6
36436 -- 36436 00	Current-carrying wiring devices, n.e.c.: Current-carrying wiring devices, n.e.c., including attachment plug caps, connector bodies, lightning arrestors, pin-and-sleeve convenience and power outlets, etc. (for additional detail, see Current Industrial Report MA-36K, Wiring Devices and Supplies) -----	125	832.7	90	569.5
36430 -- 36430 00	Current-carrying wiring devices, n.s.k. Current-carrying wiring devices, n.s.k., typically for establishments with 20 employees or more (see note) -----	(NA)	270.1	(NA)	146.3
36430 02	Current-carrying wiring devices, n.s.k., typically for establishments with less than 20 employees (see note) -----	(NA)	162.7	(NA)	100.2
		(NA)	107.4	(NA)	46.1
3644--	NONCURRENT-CARRYING WIRING DEVICES				
	Total -----	(NA)	2 815.0	(NA)	2 082.3
36441 -- 36441 00	Pole and transmission line hardware: Pole and transmission line hardware (for additional detail, see Current Industrial Report MA-36K, Wiring Devices and Supplies) -----	30	383.4	37	415.5
36442 -- 36442 00	Electrical conduit and conduit fittings: Electrical conduit and conduit fittings, including plastics conduit and conduit fittings (for additional detail, see Current Industrial Report MA-36K, Wiring Devices and Supplies) -----	77	1 468.2	85	1 021.3
36443 -- 36443 00	Noncurrent-carrying wiring devices and supplies, n.e.c.: Noncurrent-carrying wiring devices and supplies, n.e.c. (boxes, covers, bar hangers, etc.) (for additional detail, see Current Industrial Report MA-36K, Wiring Devices and Supplies) -----	78	907.2	81	574.6
36440 -- 36440 00	Noncurrent-carrying wiring devices, n.s.k. Noncurrent-carrying wiring devices, n.s.k., typically for establishments with 10 employees or more (see note) -----	(NA)	56.2	(NA)	70.9
36440 02	Noncurrent-carrying wiring devices, n.s.k., typically for establishments with less than 10 employees (see note) -----	(NA)	24.9	(NA)	53.1
		(NA)	31.3	(NA)	17.8
3645--	RESIDENTIAL LIGHTING FIXTURES				
	Total -----	(NA)	1 749.6	(NA)	1 289.7
36451 -- 36451 00	Residential type electric lighting fixtures, except portable (including parts and accessories): Residential type electric lighting fixtures, except portable, including parts and accessories (for additional detail, see Current Industrial Report MA-36L, Electric Lighting Fixtures) -----	123	864.4	121	469.8
36457 --	Portable residential type lighting fixtures and parts and accessories for residential lighting fixtures -----	(NA)	606.0	(NA)	628.9
	Incandescent portable lamps, complete: Complete with shade:				
36457 21	Floor lamps -----	52	79.3	54	71.5
36457 22	Wall lamps, including adjustable types -----	35	38.4	35	36.3
36457 23	Table lamps, excluding desk -----	81	314.3	117	332.1
36457 29	Other, including boudoir and desk -----	28	31.9	37	50.8
36457 32	Lamps sold without shades, including floor, table, etc. -----	14	21.3	9	11.6
36457 61	Fluorescent portable lamps (desks, etc.) -----	12	26.9	13	29.2
36457 73	Parts and accessories for portable residential lighting fixtures -----	12	57.4	16	48.8
36457 00	Portable residential type lighting fixtures and parts and accessories for residential lighting fixtures, n.s.k. -----	(NA)	36.5	(NA)	48.6
36450 --	Residential lighting fixtures, n.s.k. -----	(NA)	279.2	(NA)	191.0
36450 00	Residential lighting fixtures, n.s.k., typically for establishments with 5 employees or more (see note) -----	(NA)	226.8	(NA)	164.4
36450 02	Residential lighting fixtures, n.s.k., typically for establishments with less than 5 employees (see note) -----	(NA)	52.4	(NA)	26.6

See footnotes at end of table.

Table 2. Product and Product Classes—Quantity and Value of Shipments by All Producers: 1987 and 1982—Con.

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For further explanation, see Value of Shipments in appendix. For meaning of abbreviations and symbols, see introductory text]

1987 product code	Product	1987		1982	
		Number of companies with shipments of \$100,000 or more	Value of product shipments ¹ (million dollars)	Number of companies with shipments of \$100,000 or more	Value of product shipments ¹ (million dollars)
3646--	COMMERCIAL LIGHTING FIXTURES				
	Total -----	(NA)	2 669.4	(NA)	1 720.8
36462 --	Commercial and institutional type electric lighting fixtures, including parts and accessories:				
36462 00	Commercial and institutional type electric lighting fixtures, including parts and accessories (for additional detail, see Current Industrial Report MA-36L, Electric Lighting Fixtures) -----	167	2 091.5	159	1 279.2
36463 --	Industrial type electric lighting fixtures, including parts and accessories:				
36463 00	Industrial type electric lighting fixtures, including parts and accessories (for additional detail, see Current Industrial Report MA-36L, Electric Lighting Fixtures) -----	62	404.0	82	361.8
36460 --	Commercial, industrial, and institutional lighting fixtures, n.s.k. -----	(NA)	173.9	(NA)	79.8
36460 00	Commercial, industrial, and institutional lighting fixtures, n.s.k., typically for establishments with 20 employees or more (see note) -----	(NA)	87.6	(NA)	58.6
36460 02	Commercial, industrial, and institutional lighting fixtures, n.s.k., typically for establishments with less than 20 employees (see note) -----	(NA)	86.3	(NA)	21.2
3647--	VEHICULAR LIGHTING EQUIPMENT				
	Total -----	(NA)	1 366.3	(NA)	668.3
36470 --	Vehicular lighting equipment (including parts and accessories):				
36470 00	Vehicular lighting equipment, electric, including parts and accessories (for additional detail, see Current Industrial Report MA-36L, Electric Lighting Fixtures) -----	58	1 349.6	74	660.5
36470 02	Vehicular lighting equipment, n.s.k., typically for establishments with less than 10 employees (see note) -----	(NA)	16.7	(NA)	7.8
3648--	LIGHTING EQUIPMENT, N.E.C.				
	Total -----	(NA)	1 718.2	(NA)	1 170.3
36485 --	Outdoor lighting equipment (including parts and accessories):				
36485 00	Outdoor lighting equipment including parts and accessories (for additional detail, see Current Industrial Report MA-36L, Electric Lighting Fixtures) -----	100	946.7	84	706.5
36489 --	Electric and nonelectric lighting equipment, n.e.c., including hand portable equipment and parts and accessories -----	(NA)	614.6	(NA)	383.0
36489 12	Incandescent hand portable lighting equipment, except parts: -----				
	Rechargeable battery operated -----	9	25.2		
36489 16	Other than rechargeable battery operated: -----				
	Flashlights and flashlight lanterns (one to five cells) -----	14	182.2	29	164.3
36489 17	Other, such as miners' lights, emergency warning lights, generator flashlights, etc. -----	14	41.7		
36489 31	Other incandescent electric lighting equipment, including marine markers or beacons, railway and other vehicular route lighting equipment, etc., except parts and accessories -----	13	42.5	15	40.7
36489 75	Fluorescent lighting equipment, n.e.c., complete units, including processing and technical equipment -----	13	52.1	19	23.6
36489 21	Other electric lighting equipment, including electrical discharge, such as mercury vapor (other than street and highway lighting equipment, sodium vapor, etc., excluding signs) -----	13	42.6	14	19.8
36489 91	Ultraviolet and infrared health lamp fixtures, excluding lamp bulbs sold separately -----	6	26.9	5	8.7
36489 70	Parts and accessories for other electric lighting fixtures, n.e.c. -----	10	30.5	11	17.1
36489 83	Nonelectric lighting equipment, including parts: -----				
	Lamps and lanterns, including kerosene, gasoline, propane, butane, etc. -----	12	64.8	9	45.5
36489 87	Other nonelectric lighting fixtures and equipment, complete units, including carbide lamps of all types -----	5	11.2	6	9.0
36489 85	Parts and accessories for nonelectric lighting equipment, including reflectors and fittings, incandescent mantles, etc. -----	14	32.3	6	13.7
36489 00	Electric and nonelectric lighting equipment, n.e.c., including hand portable equipment and parts and accessories, n.s.k. -----	(NA)	62.6	(NA)	40.8
36480 --	Lighting equipment, n.e.c., n.s.k. -----	(NA)	156.8	(NA)	80.8
36480 00	Lighting equipment, n.e.c., n.s.k., typically for establishments with 5 employees or more (see note) -----	(NA)	90.2	(NA)	51.2
36480 02	Lighting equipment, n.e.c., n.s.k., typically for establishments with less than 5 employees (see note) -----	(NA)	66.6	(NA)	29.6

Note: In 1987 Census of Manufactures, data for establishments of small single unit companies with up to 20 employees were estimated from administrative-record data rather than data actually collected from respondents. Employment cutoffs used for administrative records for each industry and shipments figures are included in code ending with "002". In both 1987 and 1982 Censuses of Manufactures, products not completely identified on standard forms were coded in appropriate product class (five-digit) followed by "00" or to appropriate product group code (four-digit) followed by "000".

¹Data reported by all producers, not just those with shipments of \$100,000 or more.

²With the 1987 SIC revisions, SIC Industry 3641 was redefined to include electric lamp (bulb and tube) components from old SIC Industry 3699, Electrical Equipment and Supplies, N.E.C.

³For 1982, data for product code 36411 00 were published under product codes 36410 20 and 36410 55.

⁴For 1982, data for product code 36412 00 were published under product codes 36994 11 and 36994 21.

⁵For 1982, product code 36410 00 included data for cold cathode fluorescent lamps for illumination and decoration, including custom built lamps, but excluding sign applications.

Table 3. **Materials Consumed by Kind: 1987 and 1982**

[Includes quantity and cost of materials consumed or put into production by establishments classified only in this industry. For further explanation, see Cost of Materials in appendix. For meaning of abbreviations and symbols, see introductory text]

1987 material code	Material	1987		1982	
		Quantity ¹	Delivered cost (million dollars)	Quantity ¹	Delivered cost (million dollars)
	INDUSTRY 3641, ELECTRIC LAMPS				
	Materials, parts, containers, and supplies -----	(X)	823.6	(X)	(³)
320313	Glass and glass products, including lamp bulb blanks -----	(X)	378.4	(NA)	(NA)
260091	Paper and paperboard containers, including shipping sacks and other paper packaging supplies -----	(X)	35.5	(NA)	(NA)
281900	Industrial inorganic chemicals -----	(X)	(⁴)	(NA)	(NA)
335005	Nonferrous metal wire -----	(X)	(⁴)	(NA)	(NA)
364110	Electric lamp (bulb) bases -----	(X)	56.9	(NA)	(NA)
970099	All other materials and components, parts, containers, and supplies -----	(X)	⁴ 334.2	(NA)	(NA)
971000	Materials, parts, containers, and supplies, n.s.k. ² -----	(X)	18.7	(NA)	(NA)
	INDUSTRY 3643, CURRENT-CARRYING WIRING DEVICES				
	Materials, parts, containers, and supplies -----	(X)	1 413.2	(X)	868.9
	Mill shapes and forms, except castings:				
	Carbon steel:				
331011	Bars and bar shapes ----- 1,000 s tons..	(S)	7.6	(S)	2.1
331012	Sheet and strip ----- do..	(S)	21.1	*24.6	16.1
331017	Wire and wire products ----- do..	(S)	9.4	6.9	4.3
331066	All other carbon steel mill shapes and forms ----- do..	(S)	1.1	.8	1.3
331020	Alloy steel, except stainless ----- do..	(S)	1.1	(S)	1.5
	Stainless steel:				
331033	Sheet and strip ----- 1,000 s tons..	(S)	6.3	(S)	5.1
331050	All other stainless steel mill shapes and forms ----- do..	(S)	3.6	(S)	3.3
	Copper and copper-base alloy:				
335728	Bare wire (for electrical conduction only) ----- mil lb..	(S)	7.2	(S)	9.9
335102	Rod, bar, and mechanical wire, including extruded and/ or drawn shapes ----- do..	(S)	39.7	(S)	17.2
335143	Plate, sheet, and strip, including military cups and discs ----- do..	(S)	90.0	(S)	59.9
335152	Pipe and tube ----- do..	2.2	4.9	*3.0	6.4
	Aluminum and aluminum-base alloy:				
335301	Sheet, plate, and foil ----- mil lb..	(S)	7.9	(S)	4.3
335405	Extruded shapes, including extruded rod, bar, pipe, tube, etc. ----- do..	(S)	33.6	(S)	8.6
335008	All other aluminum mill shapes and forms (wire, rolled rod and bar, powder, welded tubing, etc.) ----- do..	**2.0	2.6	*3.1	5.7
335609	Nonferrous metal, except copper and aluminum ----- do..	(S)	3.2	**1.5	3.1
335791	Insulated wire and cable (except magnet wire) ----- do..	(S)	57.5	(S)	21.7
333002	Nonferrous refinery shapes ----- 1,000 s tons..	(S)	1.9	10.2	7.3
190024	Copper and copper-base alloy scrap (excluding home scrap) ----- do..	(S)	1.9	1.6	1.9
	Castings (rough and semifinished):				
332007	Iron (gray and malleable) and steel ----- mil lb..	(S)	4.1	(S)	1.4
336005	Aluminum and aluminum-base alloy ----- do..	(S)	25.6	(S)	10.9
336006	Copper and copper-base alloy ----- do..	(S)	9.2	(S)	5.3
336008	Other nonferrous ----- do..	(S)	6.4	(S)	3.0
367408	Semiconductors ----- millions..	(S)	28.4	(S)	16.7
282104	Plastics resins consumed in the form of granules, pellets, powders, liquids, etc., but excluding sheets, rods, tubes, and shapes ----- mil lb..	(S)	68.6	(S)	61.4
308007	Plastics products consumed in the form of sheets, rods, tubes, and shapes ----- do..	(X)	70.7	(X)	23.1
364300	Current-carrying wiring devices ----- do..	(X)	63.5	(X)	42.8
345001	Bolts, nuts, screws, rivets, washers, and screw machine products ----- do..	(X)	80.0	(X)	41.5
333903	Precious metals, all forms (including ingot, sheet, strip, solder, plating, electrodes, etc.) ----- 1,000 troy oz..	(S)	73.1	(S)	57.2
346901	Metal stampings ----- do..	(X)	82.1	(X)	20.5
970099	All other materials and components, parts, containers, and supplies ----- do..	(X)	392.0	(X)	283.6
971000	Materials, parts, containers, and supplies, n.s.k. ² ----- do..	(X)	210.0	(X)	121.8
	INDUSTRY 3644, NONCURRENT-CARRYING WIRING DEVICES				
	Materials, parts, containers, and supplies -----	(X)	1 100.7	(X)	1 005.6
	Mill shapes and forms, except castings:				
	Carbon steel:				
331011	Bars and bar shapes ----- 1,000 s tons..	(S)	41.6	92.8	46.6
331012	Sheet and strip ----- do..	*260.9	114.4	333.4	132.9
331017	Wire and wire products ----- do..	*4.8	5.4	(S)	14.1
331066	All other carbon steel mill shapes and forms ----- do..	**111.6	52.4	100.2	47.8
331020	Alloy steel, except stainless ----- do..	(D)	(D)	(D)	(⁴)
	Stainless steel:				
331033	Sheet and strip ----- 1,000 s tons..	(S)	5.4	*1.6	2.9
331050	All other stainless steel mill shapes and forms ----- do..	(S)	2.1	.6	.6
	Copper and copper-base alloy:				
335728	Bare wire for electrical conduction ----- mil lb..				
335102	Rod, bar, and mechanical wire, including extruded and/ or drawn shapes ----- do..	(S)	2.8	(S)	16.5
335143	Plate, sheet, and strip, including military cups and discs ----- do..				
335152	Pipe and tube ----- do..				
	Aluminum and aluminum-base alloy:				
335301	Sheet, plate, and foil ----- mil lb..	(S)	3.2	(S)	2.3
335405	Extruded shapes, including extruded rod, bar, pipe, tube, etc. ----- do..	(S)	8.2	**10.6	10.5
335008	All other aluminum and aluminum-base alloy mill shapes and forms (wire, rolled rod and bar, powder, and welded tubing, etc.) ----- do..	(S)	6.5	*3.0	3.0
335609	Nonferrous metal, except copper and aluminum ----- do..	(D)	(D)	3.9	2.6
335791	Insulated wire and cable (except magnet wire) ----- do..	(D)	(D)	**5.1	3.0
333002	Nonferrous refinery shapes ----- 1,000 s tons..	(D)	(D)	*17.0	12.9
190024	Copper and copper-base alloy scrap (excluding home scrap) ----- do..	(D)	(D)	-	-

See footnotes at end of table.

Table 3. **Materials Consumed by Kind: 1987 and 1982—Con.**

[Includes quantity and cost of materials consumed or put into production by establishments classified only in this industry. For further explanation, see Cost of Materials in appendix. For meaning of abbreviations and symbols, see introductory text]

1987 material code	Material	1987		1982	
		Quantity ¹	Delivered cost (million dollars)	Quantity ¹	Delivered cost (million dollars)
	INDUSTRY 3644, NONCURRENT-CARRYING WIRING DEVICES—Con.				
	Castings (rough and semifinished):				
332007	Iron (gray and malleable) and steel ----- mil lb..	(S)	28.8	(D)	(4)
336005	Aluminum and aluminum-base alloy ----- do..	(S)	23.9	*10.2	19.3
336006	Copper and copper-base alloy ----- do..	(S)	.5	(S)	.6
336008	Other nonferrous ----- do..	(S)	4.2	(S)	11.6
367408	Semiconductors ----- millions..	(D)	(D)	-	-
282104	Plastics resins consumed in the form of granules, pellets, powders, liquids, etc., but excluding sheets, rods, tubes, and shapes ----- mil lb..	516.7	153.1	(S)	85.7
308007	Plastics products consumed in the form of sheets, rods, tubes, and shapes -----	(X)	12.5	(X)	14.7
364300	Current-carrying wiring devices -----	(X)	4.9	(X)	6.5
345001	Bolts, nuts, screws, rivets, washers, and screw machine products -----	(X)	30.6	(X)	24.1
333903	Precious metals, all forms (including ingot, sheet, strip, solder, plating, electrodes, etc.) ----- 1,000 troy oz..	(S)	3.8	(S)	.3
346901	Metal stampings -----	(X)	8.5	(X)	2.6
970099	All other materials and components, parts, containers, and supplies -----	(X)	252.0	(X)	*232.8
971000	Materials, parts, containers, and supplies, n.s.k. ² -----	(X)	311.2	(X)	311.7
	INDUSTRY 3645, RESIDENTIAL LIGHTING FIXTURES				
	Materials, parts, containers, and supplies -----	(X)	691.4	(X)	586.1
	Mill shapes and forms, except castings and forgings:				
	Carbon steel:				
331011	Bars and bar shapes ----- 1,000 s tons..	(S)	1.0	(D)	(6)
331012	Sheet and strip ----- do..	(S)	16.8	(S)	11.7
331013	Plates ----- do..	(D)	(6)	(D)	(6)
331015	Structural shapes ----- do..	(D)	(6)	(S)	3.7
331017	Wire and wire products ----- do..	(S)	3.8	(S)	3.8
331019	All other carbon steel mill shapes and forms ----- do..	(S)	*14.8	(D)	56.7
331020	Alloy steel, except stainless ----- do..	(S)	2.7	(D)	(D)
331031	Stainless steel ----- do..	(S)	1.7	(S)	1.1
335004	Copper and copper-base alloy ----- mil lb..	(S)	4.4	(S)	15.9
	Aluminum and aluminum-base alloy:				
335301	Sheet, plate, and foil ----- mil lb..	(S)	3.4	**5.8	6.4
335405	Extruded shapes, including extruded rod, bar, pipe, tube, etc. ----- do..	(S)	3.7	(S)	4.8
335008	All other aluminum mill shapes and forms (wire, rolled rod and bar, powder, welded tubing, etc.) ----- do..	**1	.2	(S)	.4
333401	Aluminum and aluminum-base alloy refinery shapes ----- 1,000 s tons..	(D)	(D)	(D)	(D)
335791	Insulated wire and cable (except magnet wire) ----- mil lb..	(S)	4.8	(S)	7.6
335770	Magnet wire ----- do..	(D)	(D)	(S)	.4
	Castings (rough and semifinished):				
332011	Iron (gray and malleable) ----- 1,000 s tons..	(S)	5.2	(S)	3.0
332045	Steel ----- do..	(S)	6.5	(S)	2.9
336005	Aluminum and aluminum-base alloy ----- mil lb..	**3.5	5.8	(S)	5.3
336003	Other nonferrous ----- do..	(S)	7.3	(S)	9.9
308007	Plastics products consumed in the form of sheets, rods, tubes, and other shapes -----	(X)	18.5	(X)	9.4
282104	Plastics resins consumed in the form of granules, pellets, powders, liquids, etc., but excluding sheets, rods, tubes, and shapes ----- mil lb..	(S)	.9	(S)	1.6
265001	Paperboard containers, boxes, and corrugated paperboard .. 1,000 s tons..	(S)	22.9	(S)	20.0
308006	Fabricated plastics products, except gaskets -----	(X)	8.7	(X)	2.8
345001	Bolts, nuts, screws, washers, rivets, and screw machine products -----	(X)	9.1	(X)	9.2
361201	Specialty transformers and fluorescent ballasts -----	(X)	6.6	(X)	11.0
364300	Current-carrying wiring devices -----	(X)	19.5	(X)	17.7
364101	Electric lamp bulbs -----	(X)	3.2	(X)	3.9
321101	Flat glass (plate, float, and sheet) ----- mil sq ft..	(S)	14.8	(S)	6.4
399951	Lamp shades -----	(X)	27.2	(X)	18.9
349910	Metal poles -----	(X)	1.7	(X)	(7)
970099	All other materials and components, parts, containers, and supplies -----	(X)	195.5	(X)	7156.4
971000	Materials, parts, containers, and supplies, n.s.k. ² -----	(X)	280.0	(X)	245.1
	INDUSTRY 3646, COMMERCIAL LIGHTING FIXTURES				
	Materials, parts, containers, and supplies -----	(X)	1 305.4	(X)	851.1
	Mill shapes and forms, except castings and forgings:				
	Carbon steel:				
331011	Bars and bar shapes ----- 1,000 s tons..	**231.7	151.0	(S)	76.0
331012	Sheet and strip ----- do..				
331013	Plates ----- do..	(D)	(6)	(S)	.2
331015	Structural shapes ----- do..	(S)	9.6	(S)	.8
331017	Wire and wire products ----- do..	(S)	.8	26.7	20.6
331019	All other carbon steel mill shapes and forms ----- do..	(S)	*16.9		
331020	Alloy steel, except stainless ----- do..	(D)	(D)	(D)	(D)
331031	Stainless steel ----- do..	*6.0	6.6	(S)	6.2
335004	Copper and copper-base alloy ----- mil lb..	(S)	2.1	(S)	1.3
	Aluminum and aluminum-base alloy:				
335301	Sheet, plate, and foil ----- mil lb..	(S)	46.8	**14.2	27.5
335405	Extruded shapes, including extruded rod, bar, pipe, tube, etc. ----- do..	(S)	24.4	(S)	19.3
335008	All other aluminum mill shapes and forms (wire, rolled rod and bar, powder, welded tubing, etc.) ----- do..	(S)	8.0		
333401	Aluminum and aluminum-base alloy refinery shapes ----- 1,000 s tons..	(S)	6.3	1.6	1.0
335791	Insulated wire and cable (except magnet wire) ----- mil lb..	(S)	12.7	(S)	5.8
335770	Magnet wire ----- do..	(D)	(D)	(D)	(D)

See footnotes at end of table.

Table 3. Materials Consumed by Kind: 1987 and 1982—Con.

[Includes quantity and cost of materials consumed or put into production by establishments classified only in this industry. For further explanation, see Cost of Materials in appendix. For meaning of abbreviations and symbols, see introductory text]

1987 material code	Material	1987		1982	
		Quantity ¹	Delivered cost (million dollars)	Quantity ¹	Delivered cost (million dollars)
	INDUSTRY 3646, COMMERCIAL LIGHTING FIXTURES—Con.				
	Castings (rough and semifinished):				
332011	Iron (gray and malleable) 1,000 s tons..	(D)	(D)	** 9	1.6
332045	Steel do..	(S)	6.3	(S)	3.5
336005	Aluminum and aluminum-base alloy mil lb..	(S)	35.1	**8.8	18.8
336003	Other nonferrous do..	(D)	(D)	(D)	(D)
308007	Plastics products consumed in the form of sheets, rods, tubes, and other shapes	(X)	49.3	(X)	32.4
282104	Plastics resins consumed in the form of granules, pellets, powders, liquids, etc., excluding sheets, rods, tubes, and shapes mil lb..	*29.5	19.5	20.1	14.7
265001	Paperboard boxes, containers, and corrugated paperboard .. 1,000 s tons..	(S)	51.8	(S)	24.9
308006	Fabricated plastics products, except gaskets	(X)	30.7	(X)	5.7
345001	Bolts, nuts, screws, washers, rivets, and screw machine products	(X)	26.5	(X)	16.6
361201	Specialty transformers and fluorescent ballasts	(X)	350.7	(X)	208.1
364300	Current-carrying wiring devices	(X)	42.2	(X)	17.7
364101	Electric lamp bulbs	(X)	37.6	(X)	15.6
321101	Flat glass (plate, float, and sheet) mil sq ft..	(S)	15.6	(S)	3.6
399951	Lamp shades	(X)	(D)	(X)	(D)
349910	Metal poles	(X)	1.1	(X)	(7)
970099	All other materials and components, parts, containers, and supplies	(X)	139.7	(X)	*134.9
971000	Materials, parts, containers, and supplies, n.s.k. ²	(X)	185.4	(X)	184.1
	INDUSTRY 3647, VEHICULAR LIGHTING EQUIPMENT				
	Materials, parts, containers, and supplies	(X)	803.0	(X)	370.3
	Mill shapes and forms, except castings and forgings:				
	Carbon steel:				
331011	Bars and bar shapes 1,000 s tons..	(S)	(Z)		
331012	Sheet and strip do..	(S)	24.0		
331013	Plates do..		-		
331015	Structural shapes do..	(D)	(9)	(S)	23.1
331017	Wire and wire products do..	(S)	16.2		
331019	All other carbon steel mill shapes and forms do..	(S)	*2.3		
331020	Alloy steel, except stainless do..	(D)	(4)		
331031	Stainless steel do..	(S)	4.1	3.8	6.4
335004	Copper and copper-base alloy mil lb..	(S)	.4	**1.2	1.0
	Aluminum and aluminum-base alloy:				
335301	Sheet, plate, and foil mil lb..	(S)	1.0		
335405	Extruded shapes, including extruded rod, bar, pipe, tube, etc. do..	(S)	1.4	(S)	4.9
335008	All other aluminum mill shapes and forms (wire, rolled rod and bar, powder, welded tubing, etc.) do..	(S)	.1		
333401	Aluminum and aluminum-base alloy refinery shapes 1,000 s tons..	(D)	(4)	-	-
335791	Insulated wire and cable (except magnet wire) mil lb..	(S)	6.4	(S)	4.2
335770	Magnet wire do..				
	Castings (rough and semifinished):				
332011	Iron (gray and malleable) 1,000 s tons..	(D)	(4)	-	-
332045	Steel do..	(D)	(4)	-	-
336005	Aluminum and aluminum-base alloy mil lb..	(S)	3.0	(S)	1.6
336003	Other nonferrous do..	(S)	1.3	(D)	(D)
308007	Plastics products consumed in the form of sheets, rods, tubes, and other shapes	(X)	21.6	(X)	3.2
282104	Plastics resins consumed in the form of granules, pellets, powders, liquids, etc., but excluding sheets, rods, tubes, and shapes mil lb..	*125.0	125.3	66.9	47.6
265001	Paperboard containers, boxes, and corrugated paperboard .. 1,000 s tons..	**42.8	21.7	(S)	7.5
308006	Fabricated plastics products, except gaskets	(X)	41.3	(X)	11.6
345001	Bolts, nuts, screws, washers, rivets, and screw machine products	(X)	17.7	(X)	11.4
361201	Specialty transformers and fluorescent ballasts	(X)	1.1	(X)	.5
364300	Current-carrying wiring devices	(X)	20.1	(X)	10.7
364101	Electric lamp bulbs	(X)	58.1	(X)	12.0
321101	Flat glass (plate, float, and sheet) mil sq ft..	(S)	.9	(D)	(D)
399951	Lamp shades	(X)	(4)	(X)	-
349910	Metal poles	(X)	-	(X)	(7)
970099	All other materials and components, parts, containers, and supplies	(X)	*361.2	(X)	*184.6
971000	Materials, parts, containers, and supplies, n.s.k. ²	(X)	73.8	(X)	38.0
	INDUSTRY 3648, LIGHTING EQUIPMENT, N.E.C.				
	Materials, parts, containers, and supplies	(X)	707.0	(X)	413.3
	Mill shapes and forms, except castings and forgings:				
	Carbon steel:				
331011	Bars and bar shapes 1,000 s tons..	(S)	2.4	(S)	1.8
331012	Sheet and strip do..	(S)	11.6	*25.6	12.8
331013	Plates do..	(S)	3.2	*6.0	2.5
331015	Structural shapes do..	*4.2	2.7	(S)	3.7
331017	Wire and wire products do..	(S)	.9	(S)	3.1
331019	All other carbon steel mill shapes and forms do..	(S)	8.6		
331020	Alloy steel, except stainless do..	(S)	8.2	**4.2	8.2
331031	Stainless steel do..	(S)	3.7	(S)	2.3
335004	Copper and copper-base alloy mil lb..	(S)	1.2	(S)	2.0
	Aluminum and aluminum-base alloy:				
335301	Sheet, plate, and foil mil lb..	*23.0	24.5	(S)	13.2
335405	Extruded shapes, including extruded rod, bar, pipe, tube, etc. do..	(S)	31.6	(S)	18.4
335008	All other aluminum mill shapes and forms (wire, rolled rod and bar, powder, welded tubing, etc.) do..	(S)	.7	*7.8	11.7
333401	Aluminum and aluminum-base alloy refinery shapes 1,000 s tons..	(S)	4.9	*12.5	5.1

See footnotes at end of table.

Table 3. Materials Consumed by Kind: 1987 and 1982—Con.

[Includes quantity and cost of materials consumed or put into production by establishments classified only in this industry. For further explanation, see Cost of Materials in appendix. For meaning of abbreviations and symbols, see introductory text]

1987 material code	Material	1987		1982	
		Quantity ¹	Delivered cost (million dollars)	Quantity ¹	Delivered cost (million dollars)
	INDUSTRY 3648, LIGHTING EQUIPMENT, N.E.C.				
	— Con.				
335791	Insulated wire and cable (except magnet wire)	(S)	4.1	(D)	(D)
335770	Magnet wire	(D)	(D)	*2.1	3.8
	Castings (rough and semifinished):				
332011	Iron (gray and malleable)	(S)	2.4	(S)	3.6
332045	Steel	(D)	(D)	(D)	(D)
336005	Aluminum and aluminum-base alloy	(S)	52.2	(S)	23.7
336003	Other nonferrous	*10.4	5.6	(D)	(D)
308007	Plastics products consumed in the form of sheets, rods, tubes, and other shapes	(X)	3.3	(X)	11.3
282104	Plastics resins consumed in the forms of granules, pellets, powders, liquids, etc., but excluding sheets, rods, tubes, and shapes	**22.9	14.3	**13.7	8.5
265001	Paperboard containers, boxes, and corrugated paperboard	(S)	21.0	(S)	10.5
308006	Fabricated plastics products, except gaskets	(X)	21.0	(X)	3.1
345001	Bolts, nuts, screws, washers, rivets, and screw machine products	(X)	18.9	(X)	9.9
361201	Specialty transformers and fluorescent ballasts	(X)	40.4	(X)	23.3
364300	Current-carrying wiring devices	(X)	20.2	(X)	6.5
364101	Electric lamp bulbs	(X)	43.7	(X)	8.5
321101	Flat glass (plate, float, and sheet)	(S)	4.6	(S)	2.5
399951	Lamp shades	(X)	1.4	(X)	(D)
349910	Metal poles	(X)	11.2	(X)	(?)
970099	All other materials and components, parts, containers, and supplies	(X)	171.2	(X)	*107.8
971000	Materials, parts, containers, and supplies, n.s.k. ²	(X)	159.6	(X)	96.1

¹For some establishments, data have been estimated from central unit values which are based on quantity-cost relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: * 10 to 19 percent estimated; ** 20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by (S).

²Total cost of materials of establishments that did not report detailed materials data, including establishments that were not mailed a form.

³Industry definition is new for 1987 and, therefore, 1987 data for materials consumed are not comparable to prior-year data. As a result, 1982 materials consumed data are not available.

⁴Data are included with material code 970099 to avoid disclosing data for individual companies.

⁵For 1982, material codes 331011, 331013, and 331019 were combined to avoid disclosing data for individual companies.

⁶For 1987, material codes 331013, 331015, and 331019 are combined to avoid disclosing data for individual companies.

⁷For 1982, material code 349910 was not collected separately but was included with material code 970099.

⁸For 1987, material codes 331013 and 331019 are combined to avoid disclosing data for individual companies.

⁹For 1987, material codes 331015 and 331019 are combined to avoid disclosing data for individual companies.

APPENDIX

Scope and Coverage and Explanation of Terms

GENERAL

The 1987 Census of Manufactures is the 32nd census of manufacturing establishments conducted in the United States. For 1987, it was conducted as part of the economic censuses, which included the censuses of mineral industries, construction industries, retail and wholesale trades, service industries, selected transportation activities, and minority-owned and women-owned businesses, under authority of title 13 of the United States Code. Title 13 specifies that an economic census be conducted every 5 years to cover years ending in 2 and 7.

SCOPE AND COVERAGE

Establishment Basis of Reporting

The census of manufactures is conducted on an establishment basis. All manufacturing establishments with one paid employee or more at any time during the year are covered by the census of manufactures. Therefore, a company operating at more than one location is required to file a separate report for each location. This report excludes information for separately operated administrative offices, warehouses, garages, and other auxiliary units which service manufacturing establishments of the same company. Where these auxiliary operations are conducted at the same location as the manufacturing operation, they are usually included in the report for the operating manufacturing establishment.

Use of Administrative Records

From a universe of approximately 350,000 manufacturing establishments in the 1987 Census of Manufactures, approximately 150,000 small single-establishment companies were excused from filing reports. Selection of the small establishment nonmail cases was done on an industry-by-industry basis. A variable cutoff was used to determine those establishments for which administrative records were to be used in place of a census report. The cutoffs were selected so the administrative-record cases would account for approximately 3 percent or less of the value of shipments for the industry. These cutoffs were then adjusted so that all single-establishment companies with less than 5 employees were excluded from the mail canvass, while all establishments with more than 20 employees were included. Where establishments in the 5 to 20 employee size range were included in the mail canvass, an abbreviated census form was frequently used.

For these nonmail establishments, (and a small number of larger establishment whose reports were not received at the time the data were tabulated) data on employment, payroll, and receipts were obtained from administrative records of other government agencies rather than from census forms. The administrative-record information was then used in conjunction with industry averages to estimate the data for these establishments. The value of shipments and cost of materials were not distributed among specific products and materials but were included in the product and material "not specified by kind" (n.s.k.) categories.

EXPLANATION OF TERMS

Number of establishments and companies—A separate report was required for each manufacturing establishment (plant) with one employee or more. An establishment is defined as a single physical location where manufacturing is performed. A company, on the other hand, is defined as a business organization consisting of one establishment or more under common ownership or control.

All employees—Includes all full-time and part-time employees on the payrolls at any time during the year. Included are all persons on paid sick leave, paid holidays, and paid vacations. Officers of corporations are included as employees; proprietors and partners of unincorporated firms are excluded. The "all employees" number is the average number of production workers plus the number of other employees in mid-March. The number of production workers is the average of those for midmonth payroll periods of March, May, August, and November.

Production workers—Includes workers up through the working-supervisor level engaged in fabricating, processing, assembling, inspecting, receiving, packing, warehousing, shipping (but not delivering), maintenance, repair, janitorial, guard services, product development, auxiliary production for plant's own use (e.g., power-plant), recordkeeping, and other closely associated services. Truckdrivers delivering ready-mixed concrete are also included in production workers.

Other employees—Includes nonproduction personnel, including those engaged in the following activities: supervision above working-supervisor level, sales (including driver/salespersons), sales delivery (truckdrivers and helpers), advertising, credit collection, installation and

servicing of own product, clerical and routine office functions, executive, purchasing, finance, legal, personnel (including cafeteria, etc.), professional, and technical employees.

Payroll—Includes the gross earnings for the “employees” defined above, such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, and compensation in kind, prior to such deductions as employees’ Social Security contributions, withholding taxes, group insurance, union dues, and savings bonds. Respondents were told that in reporting they could follow the definition of payrolls used for calculating the Federal withholding tax.

Production-worker hours—Covers hours worked or paid for at the plant, including actual overtime hours (not straight-time equivalent hours). It excludes hours paid for vacations, holidays, or sick leave when the employee was not at the plant.

Cost of materials—Refers to direct charges actually paid or payable for items consumed or put into production during the year, including freight charges and other direct charges incurred by the establishment in acquiring these materials. It includes the cost of materials or fuels consumed, regardless of whether they were purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year.

The important components of this cost item are (a) all raw materials, semifinished goods, parts, containers, scrap, and supplies put into production or used as operating supplies and for repair and maintenance during the year; (b) electric energy purchased; (c) fuels consumed for heat, power, or generating electricity; (d) work done by others on materials or parts furnished by manufacturing establishments (contract work); and (e) products bought and resold in the same condition.

Specific materials consumed (table 3)—In addition to the total cost of materials which every establishment was required to report, information was also collected for most manufacturing industries on the consumption of major materials used in manufacturing. These inquiries were restricted to those materials which were important parts of the cost of production in a particular industry and for which cost information was available from manufacturers’ records. Establishments consuming less than a specified amount (usually \$10,000) of a specific material were not requested to report consumption of that material separately. Also, the cost of materials for the small establishments for which administrative records were used was estimated as “not specified by kind” (n.s.k.).

Value of shipments and other receipts—Generally refers to received or receivable net selling values, f.o.b. plant (exclusive of freight and taxes), of all products shipped, both primary and secondary, as well as all

miscellaneous receipts such as receipts for contract work performed for others, installation and repair receipts, sale of scrap, and sale of products bought and resold without further processing. Included are all items made by or for the establishment from materials owned by it whether sold, transferred to other plants of the same company, or shipped on consignment. The net selling value of products made in one plant on a contract basis from materials owned by another was reported by the plant providing the materials.

In a few industries, the value of production or value of work completed is used instead of value of shipments. These industries are identified in the introduction and are footnoted in table 1.

In the case of multiunit companies, the manufacturer was requested to report the value of products transferred to other establishments of the same company at full economic or commercial value, that is, including not only the direct costs of production but also a reasonable proportion of “all other costs” (including company overhead and profit).

Shipments or production of individual products (table 2)—In the 1987 census, detailed shipment information was collected for approximately 11,000 individual products. These products are identified by a seven-digit code and are grouped into approximately 1,500 classes of products, which in turn are primary to 459 four-digit industries. Data at the five-digit product-class level have been collected each year as part of the annual survey of manufactures. Information at the seven-digit level, collected for many industries in the current industrial reports program, is not included in this table.

Value added by manufacture—This measure of manufacturing activity is derived by subtracting the cost of materials, supplies, containers, fuel, purchased electricity, and contract work from the value of shipments for products manufactured plus receipts for services rendered. The result of this calculation is then adjusted by the addition of value added by merchandising operations (that is, the difference between the sales value and cost of merchandise sold without further manufacturing, processing, or assembly) plus the net change in finished goods and work-in-process inventories between the beginning and end of the year.

For those industries where value of production is collected instead of value of shipments (see footnote in table 1), value added is adjusted only for the change in work-in-process inventories between the beginning and end of the year. For those industries where value of work done is collected, the value added does not include an adjustment for the change in finished goods or work-in-process inventories.

Value added avoids the duplication in the figure for value of shipments which results from the use of products of some establishments as materials by others. Value

added is considered to be the best value measure available for comparing the relative economic importance of manufacturing among industries and geographic areas.

Expenditures for new plant and equipment—Establishments in operation and any known plants under construction were asked to report their expenditures for (a) permanent additions and major alterations to manufacturing establishments and (b) new machinery and equipment used for replacement and additions to plant capacity if they are of the type for which depreciation accounts are ordinarily maintained.

These totals exclude expenditures for used plant and equipment, expenditures for land, and cost of maintenance and repairs charged as current operating expenses. Data for used plant and equipment will be published in the final industry bulletin.

End-of-year inventories—Comprised of (a) finished products; (b) work-in-process; and (c) materials, supplies, fuels, etc. Beginning in 1982, respondents were asked to report their inventories at (the lower of) cost or market prior to adjustment to LIFO cost. This is a change from prior years in which respondents were permitted to value their inventories using any generally accepted accounting method.

Therefore, 1982 through 1987 data for inventories are not strictly comparable to prior-year data.

Specialization and coverage ratios—An establishment is classified in a particular industry if its shipments of primary products of the industry exceed in value its shipments of the products of any other single industry. An establishments' shipments include those products assigned to an industry (primary products), those considered primary to other industries (secondary products), and receipts for miscellaneous activities (merchandising, contract work, resales, etc.). The following ratios have been developed to measure the relationship of primary product shipments to the data on shipments for the industry shown in table 1 and data on product shipments shown in table 2.

Specialization ratio—Represents the ratio of primary product shipments to total product shipments (primary and secondary, excluding miscellaneous receipts) for the establishments classified in the industry.

Coverage ratio—Represents the ratio of primary products shipped by the establishments classified in the industry to the total shipments of such products that are shipped by all manufacturing establishments, wherever classified.

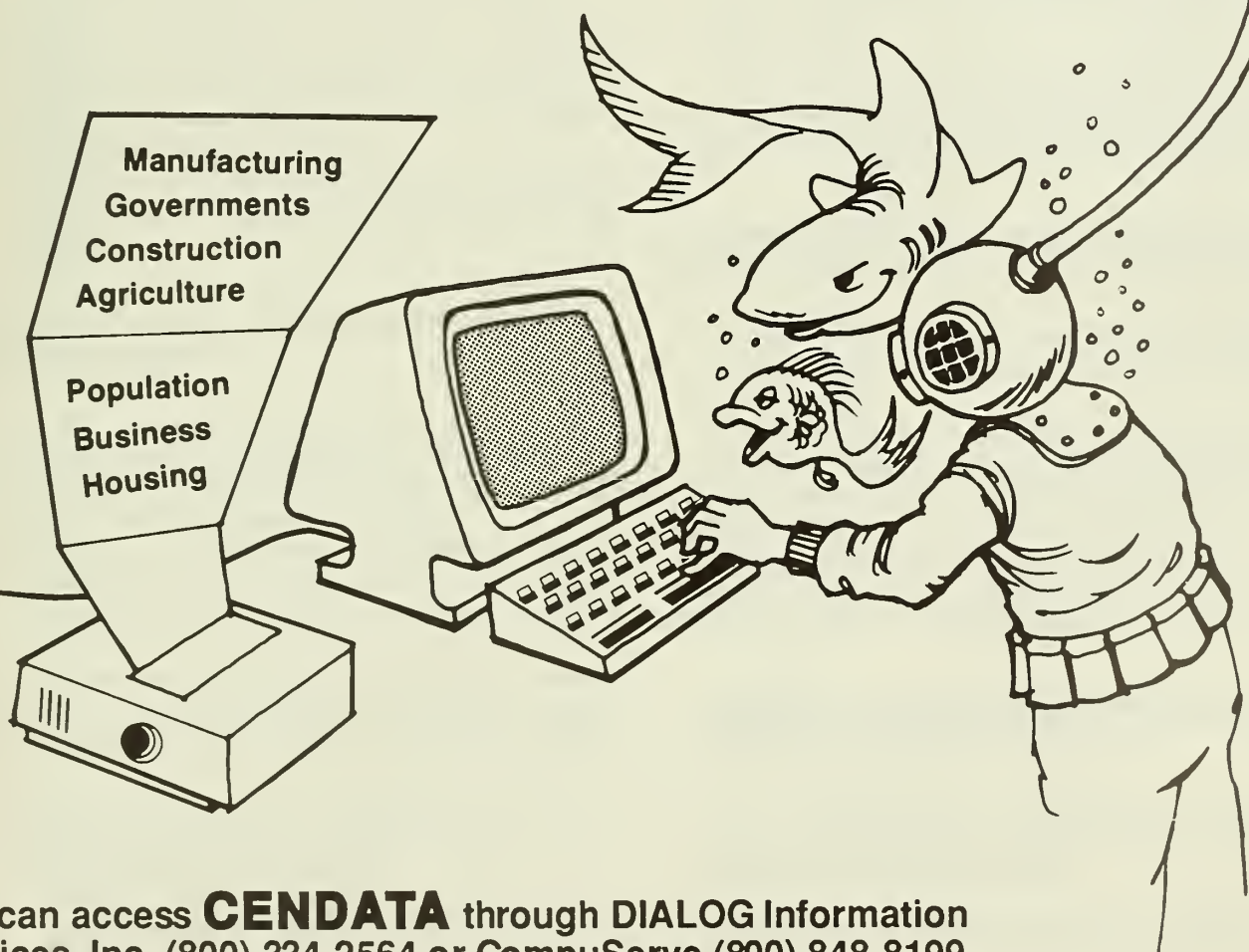


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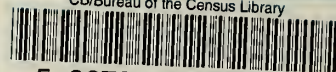
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